

# U.S. ARMY COST AND ECONOMIC ANALYSIS CENTER



Richard D. Bishop  
February 2, 2000



**Army Force Structure & Infrastructure  
Cost Analysis Assessment  
[www.ceac.army.mil](http://www.ceac.army.mil)  
ADODCAS**

# Army's Approach To Support (O&S) Costing

## ■ FORCES

- ➔ DEVELOP FORCE STRUCTURE COST ESTIMATES AND FACTORS FOR FORCE STRUCTURE ANALYSES AND CONTINGENCY OPERATIONS

## ■ OPERATIONS

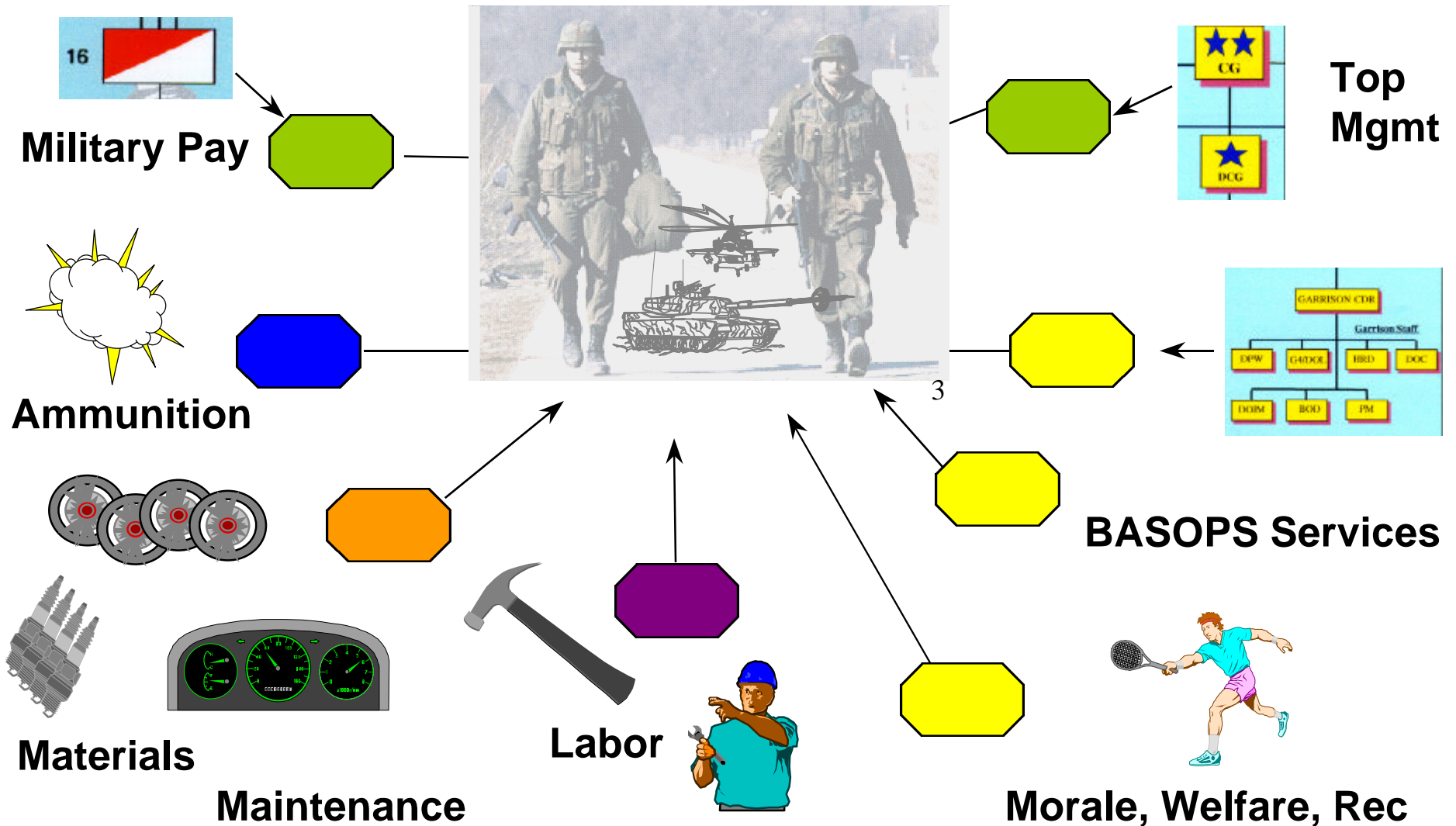
- ➔ DEVELOP COST FACTORS FOR OVER 400 SYSTEMS FOR OPTEMPO POM/BES/PRES BUD
- ➔ DEVELOP OPTEMPO USAGE RATES
- ➔ DEVELOP UNITED NATIONS AND FLYING HOUR REIMBURSEMENT RATES
- ➔ DEVELOP OPERATING AND SUPPORT COST ESTIMATES FOR FUTURE WEAPON SYSTEMS

## ■ INSTALLATIONS

- ➔ DEVELOP COST FACTORS FOR 95 BASE OPERATIONS SERVICES AND ACTIVITIES
- ➔ DEVELOP COST FACTORS FOR OVER 330 FACILITY TYPES FOR THE INSTALLATION STATUS REPORT

# A Total Cost Perspective

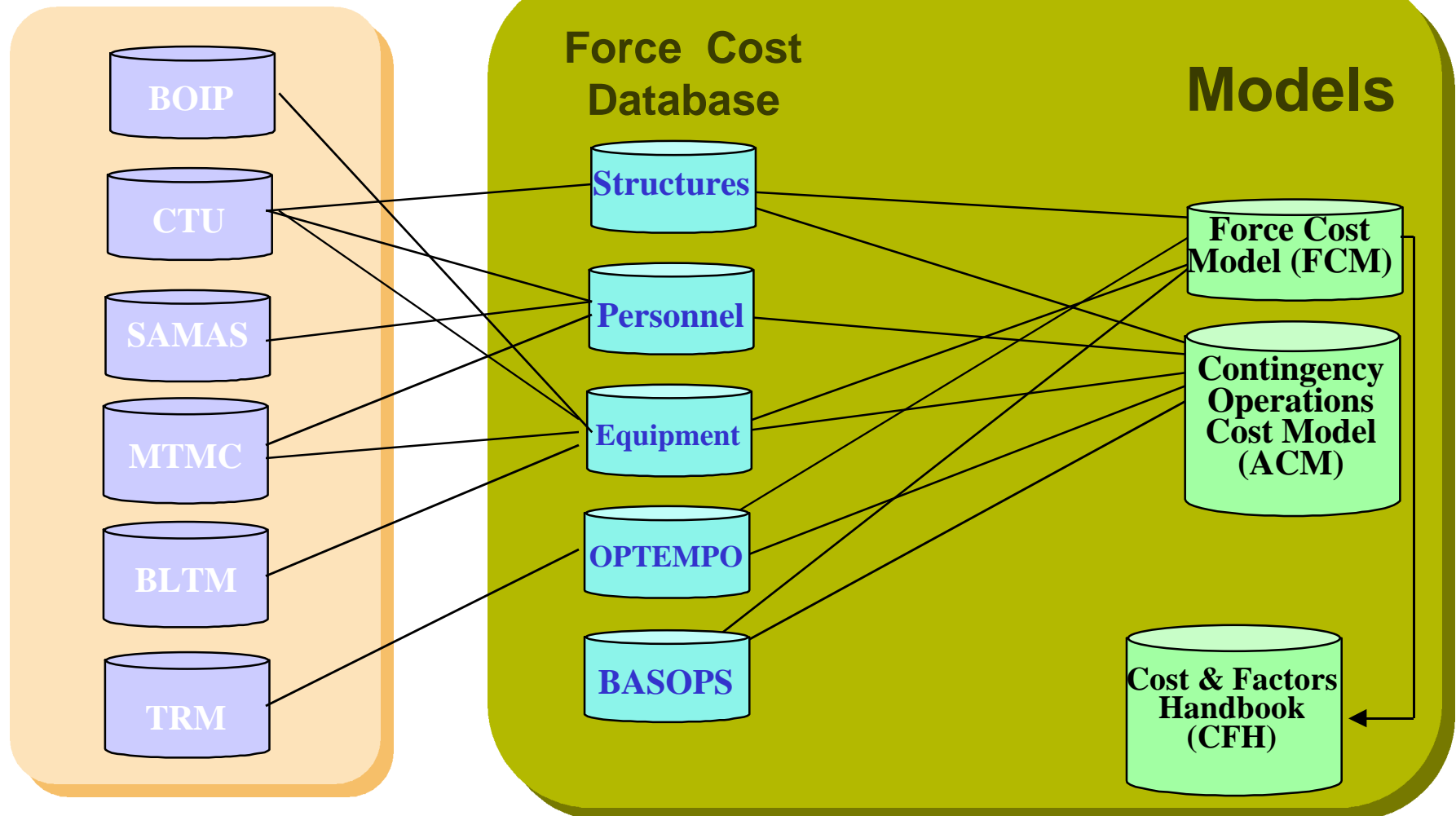
## *"Linking All Cost To A Unit"*



# How Do We Get FORCES Data?



## Data Sources



# FORCES Data



- ✚ **Approximately 1100 Types of Units**
- ✚ **Validated Data From Army Proponents**
  - ✓ **OPTEMPO Cost Factors**
  - ✓ **Personnel Cost Factors**
  - ✓ **Base Operations Cost Factors**
  - ✓ **Indirect Support Cost Factors**
  - ✓ **Movement Cost Factors**
  - ✓ **Many More**

# Who Uses FORCES ?



- ➡ FORCES is widely used - over 200 users.
- ➡ Used throughout DA: All MACOMS, OCSA, DCSOPS, CAA, DCSLOG, PA&E, AMSAA, ADO, OCAR, NGB, AAA, ACE, AI Center, PMs/PEOs, MTMC, USAFISA, Division/unit DCRMs, Schools/training centers, etc.
- ➡ OSD, Joint Staff, USSOCOM, US Military Staff Committee, IDA, OMB, GAO, CBO and other governmental agencies.
- ➡ Other Services

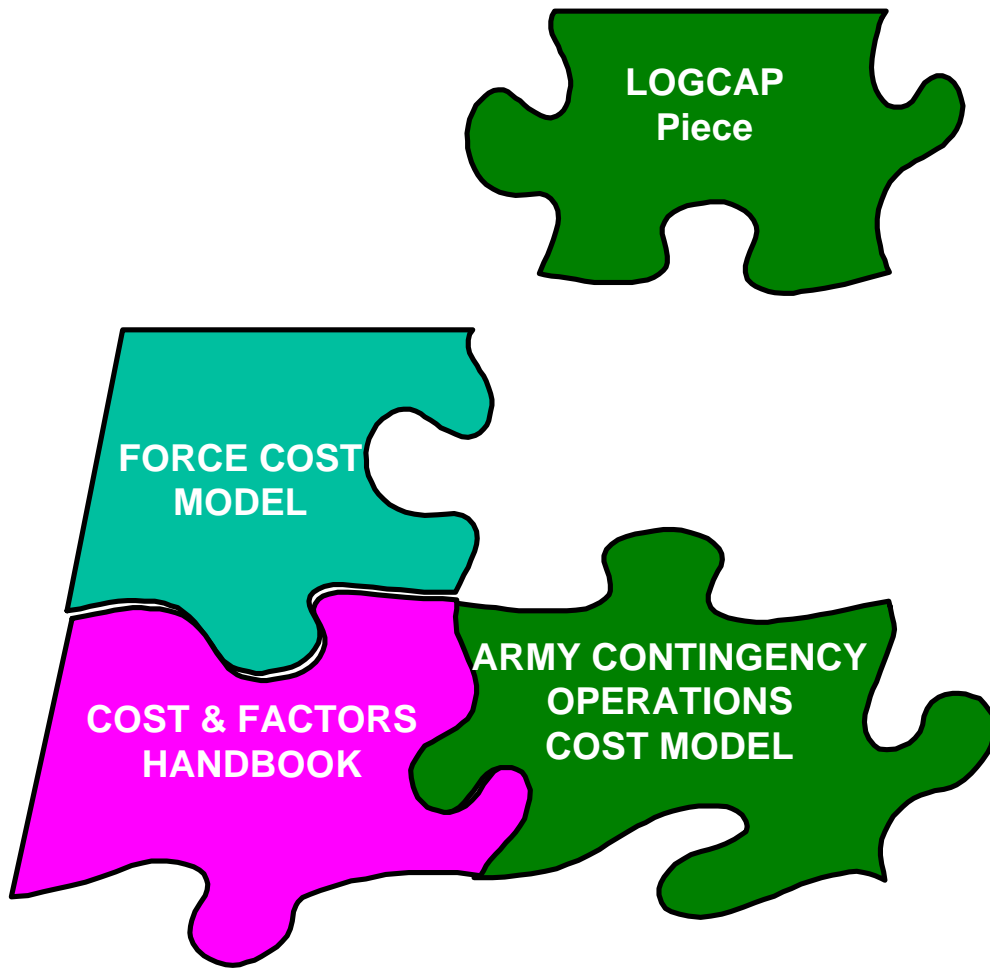
# **Sample Uses of The FORCES Cost Model**



- ✓ **Quadrennial Defense Review (QDR)**
- ✓ **Contingency Deployment \$ Estimates (Somalia, Operation Mitch, Bosnia, Kosovo etc)**
- ✓ **Cost and Operational Effectiveness Analyses**
- ✓ **Cadre Division Studies\ Division Re- flagging Cost Estimates**
- ✓ **Roles and Missions Studies**
- ✓ **Overseas Stationing Studies**
- ✓ **Every Conceivable Friday Afternoon “What-If” Cost Drill**

# FORCES Models

## FORCES 2000



## *Improvements to FORCES Models*

- Download From Website
- Tutorial on Website
- Online Database Query Capability
- More Frequently Data Updates
- Allow for Costing of UICs
- Introduction of Army Contingency Operations Cost Model
- Include LOGCAP Cost Estimates
- Allow Analogous SRC Costing
- Capability to Import Force Structure Files & Make Global Changes



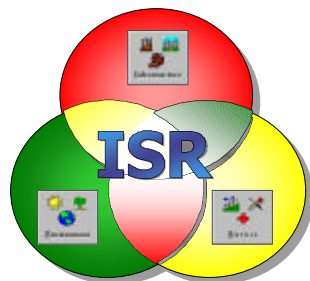
# Force And Organization Cost Estimating System (Forces)

## ■ Force Cost & Contingency Operations Cost Model

## ■ Cost & Factors Handbook

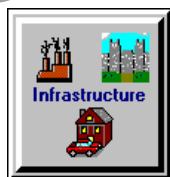


[www/sbcweb.calibresys.com/forces](http://www.sbcweb.calibresys.com/forces)

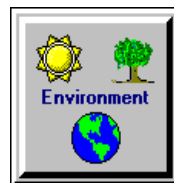


# Installation Status Report (ISR)

## Three Parts



**AREAS**  
MISSION  
MOBILITY  
HOUSING  
COMMUNITY  
INSTALLATION SUPPORT



**PILLARS**  
COMPLIANCE  
CONSERVATION  
POLLUTION PREVENTION  
RESTORATION  
FOUNDATION



**MAJOR SERVICE ACTIVITIES**  
PERSONNEL & COMMUNITY  
INFORMATION TECH  
OPERATIONS  
LOGISTICS  
ENGINEERING  
RESOURCE MGT  
ACQUISITION  
HEALTH SERVICES  
COMMAND & STAFF



# **ISR Part I - RPM**

## **Cost Methodology**

### **■ Renovation Cost Factor**

- FCG Costs Developed Using RS Means (Industry Standards) , Percent Of New Construction**
- Distinct Cost Factors For Amber To Green & Red To Green**

### **■ New Construction Cost Factor**

- Costs From Engineering Standard Planning Factors**
- At FCG, Unit Of Measure Requirement**

### **■ Sustainment Cost Factor**

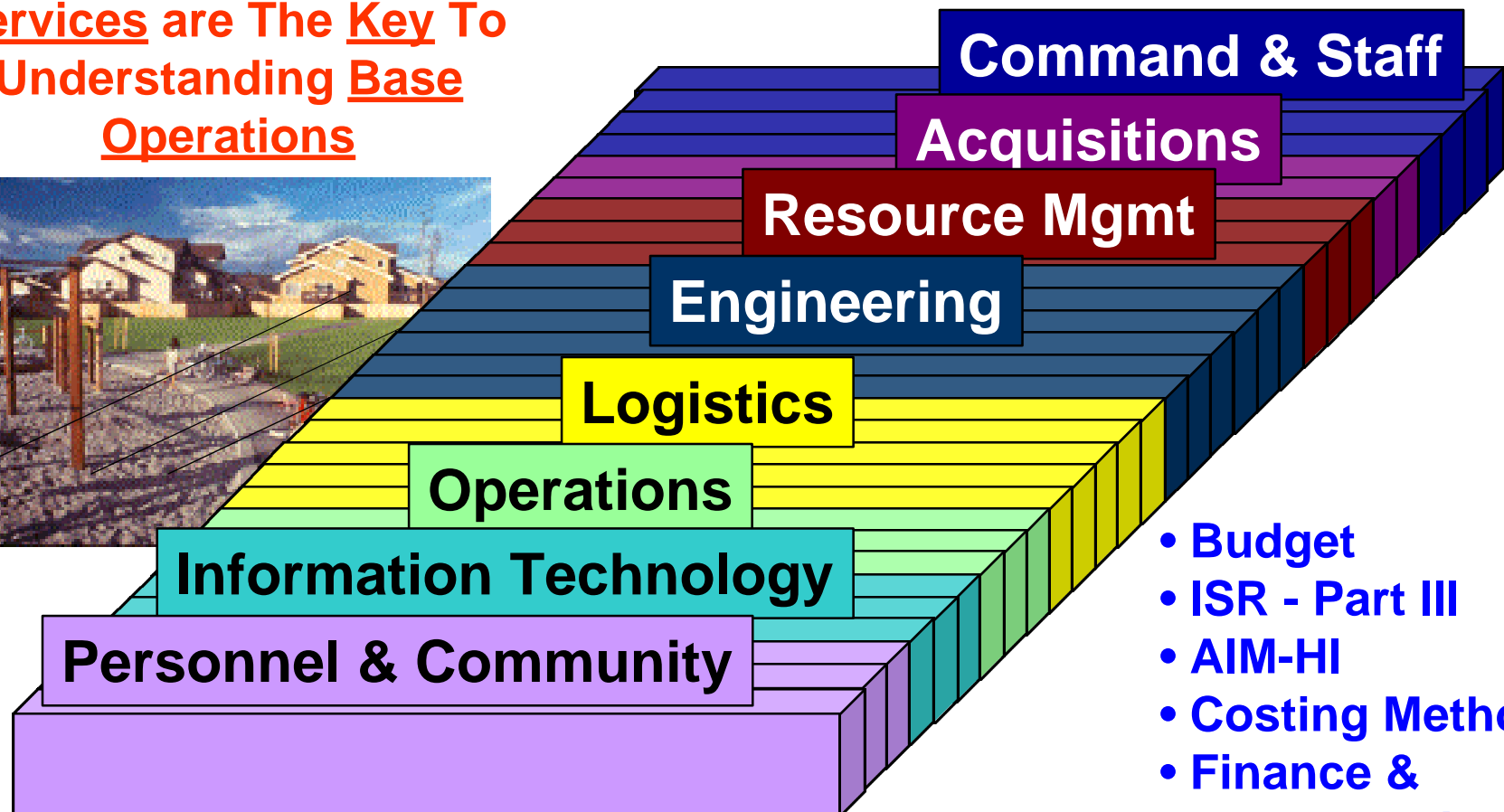
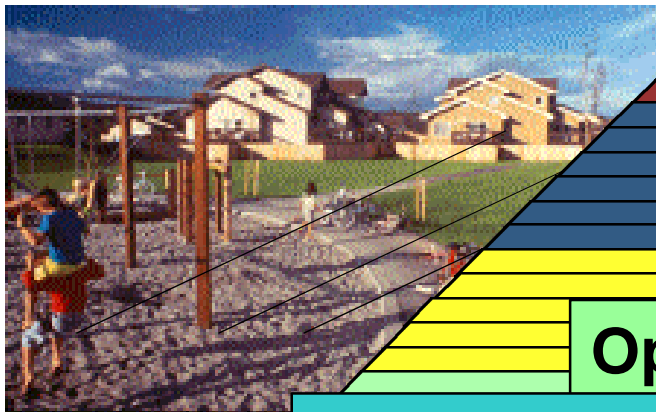
- Based On Maintaining A Facility At Current Status**
- For Building FCG, Costs From RS Means**



# ISR Part 3 - Base Operations

## *95 Services*

Services are The Key To  
Understanding Base  
Operations



- Budget
- ISR - Part III
- AIM-HI
- Costing Methods
- Finance & Accounting
- Reimbursement

**Cost Account Structure For Installations**

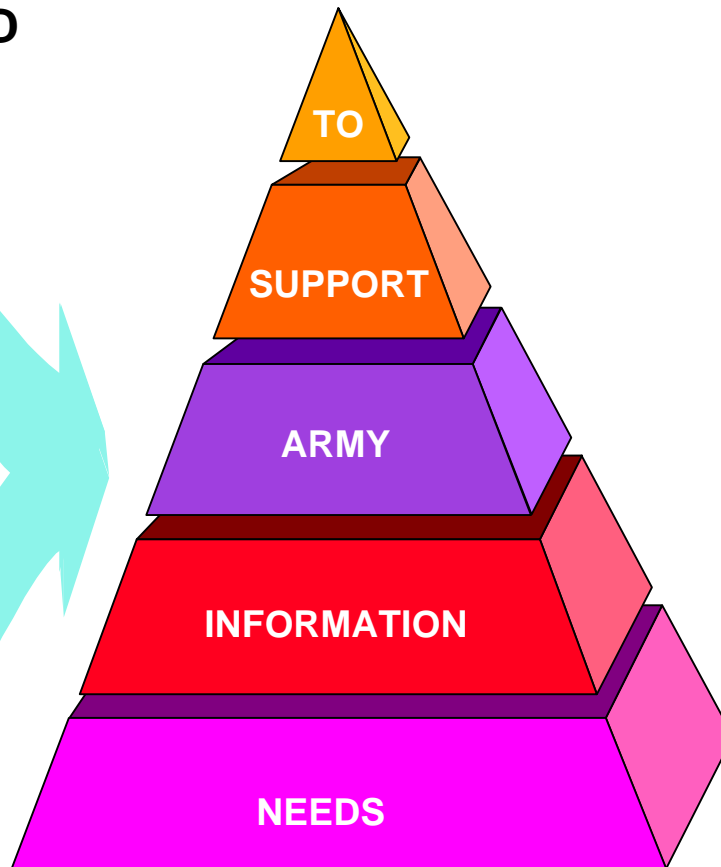


# BASOPS Cost Methodologies

**STANDARD  
SERVICE  
COSTING  
(SSC)**

**SERVICE  
BASED  
COSTING  
(SBC)**

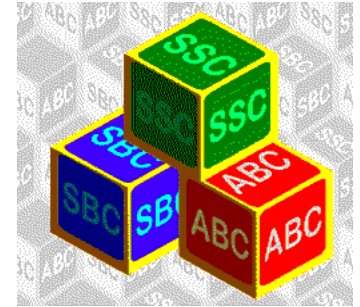
**ACTIVITY  
BASED  
COSTING  
(ABC)**



- **FULL COST... “Total Cost”**
- **COMMON LANGUAGE OF SERVICES**
- **PERFORMANCE MEASURES (GPRA) ... OUTPUT/OUTCOME**
- **COMPARATIVE COST DATA**
- **STANDARDS TO MEASURE PERFORMANCE**
- **DEFEND REQUIREMENTS**
- **MEANS TO BENCHMARK**
- **SUPPORTS REENGINEERING**
- **MEASURE IMPROVEMENT**

# Costing Methodologies

## *Serve Multiple Levels*



- ✓ **STANDARD SERVICE COSTING (SSC)**  
→ A STANDARD COST FOR AN EXPECTED LEVEL OF PERFORMANCE

- Expected Service Costs
- Quantity Output
- Quality Metrics

- ✓ **SERVICE BASED COSTING (SBC)**  
→ MEASURES THE COSTS INCURRED TO PROVIDE A SERVICE AND THE OUTPUT PRODUCED

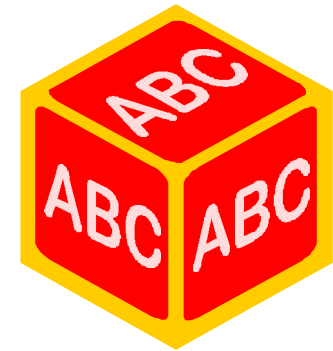
- Service-Set Of Activities
- Relevant Costs
- Accounting System Link

- ✓ **ACTIVITY BASED COSTING (ABC)**  
→ A METHOD OF MEASURING THE CONSUMPTION OF RESOURCES BY ACTIVITIES AND THE CONSUMPTION OF ACTIVITIES BY A SERVICE

- Activity-Set Of Actions
- More Accurate Costs
- Managerial Tool

# **Implement Cost Management / Decentralized ABC in 11 Business Areas**

- **Depot Maintenance Operations**
- **Supply Management**
- **Ordnance**
- **Information Support**
- **Civilian Human Resources**
- **Institutional Training**
- **Base Operations and Support**
- **Research and Development Laboratories**
- **Test and Evaluation**
- **Contracting Process**
- **Acquisition Process**



# Summary



- ✓ **FORCES Has Been Institutionalized As Army's Authoritative Cost Estimating Tool**
- ✓ **A Variety of Customers Depend on FORCES for Decision Making**
- ✓ **Future Force Costing Enhancements Will Emphasize Analytical Tools That Are: Responsive and Flexible**
- ✓ **Army Cost Management Plan / ABC was Approved By OSD - November 1999**
- ✓ **Army's ABC Implementation Will Improve Infrastructure Costing**